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READING-AURALLY HANDICAPPED AND VISUALLY IMPAIRED

A Selective Bibliography

CEC Information Services and Publications
An ERIC Clearinghouse
The Council for Exceptional Children
1920 Association Drive
Reston, Virginia 22091

Exceptional Child Bibliography Series No. 666

1975

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CEC Information Center Journal Collection

The CEC Information Center regularly receives over 200 journals which are examined for material concerning exceptional children. Those articles judged to meet established criteria are abstracted, indexed and published in *Exceptional Child Education Abstracts*. Some of these articles are also indexed and submitted for announcement in *Current Index to Journals in Education*, an Educational Resources Information Center (ERIC) publication. The following list is representative of all journals currently received at the Center.

- Academic Therapy**, 1539 Fourth Street, San Rafael, California 94901
- ACTA Symbolica**, University of Akron, Akron, Ohio 44304
- Adolescence**, PO Box 165, 391 Willets Road, Roslyn Heights, New York 11577
- American Annals of the Deaf**, 5034 Wisconsin Avenue NW, Washington DC 20016
- American Education**, 400 Maryland Avenue SW, Washington DC 20202
- American Educational Research Journal**, 1126 16th Street NW, Washington DC 20036
- American Journal of Diseases of Children**, 535 North Dearborn Street, Chicago, Illinois 60610
- American Journal on Mental Deficiency**, 49 Sheridan Avenue, Albany, New York 12210
- American Journal of Occupational Therapy**, 6000 Executive Boulevard, Suite 200, Rockville, Maryland 20852
- American Journal of Orthopsychiatry**, 1790 Broadway, New York, New York 10019
- American Sociological Review**, 1001 Connecticut Avenue NW, Washington DC 20036
- Archives of General Psychiatry**, 535 North Dearborn Street, Chicago, Illinois 60610
- Archives of Otolaryngology**, 535 North Dearborn Street, Chicago, Illinois 60610
- Arithmetic Teacher**, 1201 16th Street NW, Washington, D.C. 20036
- ASHA**, 9030 Old Georgetown Road, Washington, D.C. 20014
- Aubecidel**, 24261 Grand River Avenue, Detroit, Michigan 48219
- Audiovisual Instruction**, 1201 16th Street, N.W., Washington, D.C. 20036
- Australian Children Limited**, Box 91, Brighton 5048 South Australia
- Australian Journal of Mental Retardation**, P.O. Box 255, Carlton, South Victoria, Australia 3053
- Australian Teacher of the Deaf**, 25 Marshall Avenue, KEW 303, Victoria, Australia
- AVISO**, Newark State College, Union, New Jersey 07083
- Behavior Therapy**, 111 Fifth Avenue, New York, New York 10003
- Behavioral Science**, University of Michigan, Ann Arbor, Michigan 48104
- British Journal of Disorders of Communication**, 4345 Annandale Street, Edinburgh EH7 4AT Scotland
- British Journal of Mental Subnormality**, Monyhull Hospital, Birmingham B30 3QB England
- British Journal of Physical Education**, Ling House, 10 Nottingham Place, London W1M 4AX England
- Bulletin of the British Psychological Society**, 18 19 Albermarle Street, London W1X 4DN England
- Bulletin of the National Association of Secondary School Principals**, 1201 16th Street, N.W., Washington, D.C. 20036
- Bulletin of the Orton Society**, 8415 Bellona Lane, Suite 204, Towson, Maryland 21204
- Bulletin of Prosthetics Research**, U.S. Government Printing Office, Washington, D.C. 20402
- Bureau Memorandum**, 126 Langdon Street, Madison, Wisconsin 53702
- CSMR Bulletin**, 345 Campus Towers, Edmonton, Alberta, Canada
- California Journal of Education Research**, 1705 Murchison Drive, Burlingame, California 94010
- California State Federation CEC Journal**, P.O. Box 2315, Pleasant Hill, California 94523
- Canadas Mental Health**, Information Canada, Ottawa K1A 0S9 Canada
- Canadian Journal of Public Health**, 1255 Yonge Street, Toronto 7, Canada
- Change**, Box 2450, Boulder, Colorado 80302
- Changing Education**, 1012 14th Street, N.W., Washington, D.C. 20005
- Child and Family**, 244 South Wesley, Oak Park, Illinois 60302
- Child Care Quarterly**, 2852 Broadway, Morningside Heights, New York 10025
- Child Development**, 5750 Ellis Avenue, Chicago, Illinois 60637
- Child Psychiatry & Human Development**, 2852 Broadway, Morningside Heights, New York 10025
- Child Study Journal**, 1300 Elmwood Avenue, Buffalo, New York 14222
- Child Welfare**, 67 Irving Place, New York, New York 10003
- Childhood Education**, 3615 Wisconsin Avenue, N.W., Washington, D.C. 20016
- Children Today**, U.S. Government Printing Office, Washington, D.C. 20402
- Childrens House**, Box 111, Caldwell, New Jersey 07006
- Clearing House**, 205 Lexington Avenue, Sweet Springs, Missouri 65351
- Colorado Journal of Educational Research**, University of Northern Colorado, Greeley, Colorado 80631
- Compact**, 300 Lincoln Tower, 1860 Lincoln Street, Denver, Colorado 80203
- Current**, Goddard Publications, Inc., Painfield, Vermont 05667
- Current Citations of Communication Disorders**, 310 Harriet Lane, Baltimore, Maryland 21205
- Datamation**, 94 South Las Robles Avenue, Pasadena, California 91101
- Day Care & Early Education**, 2852 Broadway, New York, New York 10025
- Deaf American**, 5125 Radnor Road, Indianapolis, Indiana 46226
- Devereux Schools**, 19 South Waterloo Road, Devon, Pennsylvania 19333
- DSH Abstracts**, Gallaudet College, Washington, D.C. 20002
- Early Years**, P.O. Box 1223, Darien, Connecticut 06820
- Educate**, 33 West 60th Street, New York, New York 10023
- Education and Culture**, Council of Europe, Strasbourg, France
- Education and Training of the Mentally Retarded**, 1920 Association Drive, Reston, Virginia 22091
- Education Canada**, 252 Bloor Street, West, Toronto M5S 1V5 Ontario, Canada
- Education Digest**, P.O. Box 623, 416 Longshore Drive, Ann Arbor, Michigan 48107
- Education of the Hearing Impaired Bulletin**, 1537 35th Street, N.W., Washington, D.C. 20007
- Education of the Visually Handicapped**, 1604 Spruce Street, Philadelphia, Pennsylvania 19103
- Education & Psychological Measurement**, Box 6907, College Station, Durham, North Carolina 27708
- Education Forum**, 343 Armory Building, University of Illinois, Champaign, Illinois 61820
- Educational Horizons**, 2000 East 8th Street, Bloomington, Indiana 47401
- Educational Leadership**, 1201 16th Street, N.W., Washington, D.C. 20036
- Educational Media**, 1015 Florence Street, Fort Worth, Texas 76102
- Educational Researcher**, 1126 16th Street, N.W., Washington, D.C. 20036
- Educational Technology**, 140 Sylvan Avenue, Englewood Cliffs, New Jersey 07632
- Elementary English**, 1111 Kenyon Road, Urbana, Illinois 61801
- Elementary School Journal**, 5801 Ellis Avenue, Chicago, Illinois 60637
- Emotionally Handicapped Children Bulletin**, Southern Connecticut State College, New Haven, Connecticut 06515
- English Journal**, 1111 Kenyon Road, Urbana, Illinois 61801
- Exceptional Children**, 1920 Association Drive, Reston, Virginia 22091
- Exceptional Parent**, 264 Beacon Street, Boston, Massachusetts 02116
- Focus on Exceptional Children**, 6635 East Villanova Place, Denver, Colorado 80222
- Gallaudet Today**, Gallaudet College, Office of Information, Washington, D.C. 20002
- Genetic Psychology Monographs**, 2 Commercial Street, Provincetown, Massachusetts 02657
- Gifted Child Quarterly**, 8080 Springvalley Drive, Cincinnati, Ohio 45236
- Harvard Educational Review**, 23 South Main Street, Uxbridge, Massachusetts 02138

- Hearing, 105 Gower Street, London WC1E 6AH England
- Hearing & Speech News, 814 Thayer Avenue, Silver Spring, Maryland 20910
- Hearing News, 919 18th Street, N.W., Washington, D.C. 20006
- Human Needs, U.S. Government Printing Office, Washington, D.C. 20402
- Health Services Reports, Room 4A-54, Parklawn Building, 5600 Fishers Lane, Rockville, Maryland 20852
- Illinois Schools Journal, 6800 South Stewart Avenue, Chicago, Illinois 60621
- Indiana Speech & Hearing Journal, Ball State University, Muncie, Indiana 47306
- Instructor, P.O. Box 6099, Duluth, Minnesota 55806
- Interchange, 252 Bloor Street, West, Toronto 5, Ontario, Canada
- International Child Welfare Review, 1 Rue De Varembe, 1211 Geneva 20, Switzerland
- International Journal of Child Psychiatry, Verlag, Basel, Switzerland
- International Rehabilitation Review, 219 East 44th Street, New York, New York 10017
- Involvement, P.O. Box 460, Oak Ridges, Ontario, Canada
- Journal for Special Education, Box 171, Center Conway, New Hampshire 03813
- Journal of Abnormal Child Psychology, 1511 K Street, N.W., Washington, D.C. 20005
- Journal of Abnormal Psychology, 1200 17th Street, N.W., Washington, D.C. 20036
- Journal of the American Optometric Association, 7000 Chippewa Street, St. Louis, Missouri 63119
- Journal of Applied Behavior Analysis, University of Kansas, Lawrence, Kansas 66044
- Journal of Applied Rehabilitation Counseling, 1522 K Street, N.W., Washington, D.C. 20005
- Journal of Association for Study of Perception, P.O. Box 744, De Kalb, Illinois 60115
- Journal of Auditory Research, Box N, Groton, Connecticut 06340
- Journal of Autism & Childhood Schizophrenia, 1511 K Street, N.W., Washington, D.C. 20005
- Journal of Child Psychology & Psychiatry, Pergamon Press, Elmsford, New York 10523
- Journal of Consulting & Clinical Psychology, 1200 17th Street, N.W., Washington, D.C. 20036
- Journal Creative Behavior, 1300 Elmwood Avenue, Buffalo, New York 14222
- Journal of Education, Department of Education, Halifax, Nova Scotia
- Journal of Educational Psychology, 1200 17th Street, N.W., Washington, D.C. 20036
- Journal of Educational Research, Box 1605, Madison, Wisconsin 53701
- Journal of Experimental Education, Box 1605, Madison, Wisconsin 53701
- Journal of General Education, 215 Wagner Building, University Park, Pennsylvania 16802
- Journal of General Psychology, 2 Commercial Street, Provincetown, Massachusetts 02657
- Journal of Genetic Psychology, 2 Commercial Street, Provincetown, Massachusetts 02657
- Journal of Health and Social Behavior, 1001 Connecticut Avenue, N.W., Washington, D.C. 20036
- Journal of Health Physical Education, 1201 16th Street, N.W., Washington, D.C. 20036
- Journal of Infectious Disease, 5750 Ellis Avenue, Chicago, Illinois 60637
- Journal of Learning Disabilities, 5 North Wabash Avenue, Chicago, Illinois 60602
- Journal of Marriage & the Family, 1219 University Avenue, S.E., Minneapolis, Minnesota 55414
- Journal of Mental Deficiency Research, 86 Newman Street, London W1P 4AR England
- Journal of Music Therapy, Box 610, Lawrence Kansas 66044
- Inter Clinic Information Bulletin, 317 East 34th Street, New York, New York 10016
- Journal of Negro Education, Howard University, Washington, D.C. 20001
- Journal of Nervous & Mental Disease, 428 East Preston Street, Baltimore, Maryland 21202
- Journal of Pediatrics, 11830 Westline Industrial Drive, St. Louis, Missouri 63141
- Journal of Personality & Social Psychology, 1200 17th Street, N.W., Washington, D.C. 20036
- Journal of Personality Assessment, 1070 East Angeleno Avenue, Burbank, California 91501
- Journal of Psychiatric Nursing, 6900 Grove Road, Thorofare, New Jersey 08086
- Journal of Psychology, 2 Commercial Street, Provincetown, Massachusetts 02657
- Journal of Reading, 6 Tyre Avenue, Newark, Delaware 19711
- Journal of Rehabilitation, 1522 K Street, N.W., Washington, D.C. 20005
- Journal of Rehabilitation of the Deaf, 814 Thayer Avenue, Silver Spring, Maryland 20910
- Journal of School Psychology, 51 Riverside Avenue, Westport, Connecticut 06880
- Journal of Social Issues, Box 1248, Ann Arbor, Michigan 48106
- Journal of Social Psychology, 2 Commercial Street, Provincetown, Massachusetts 02657
- Journal of Special Education, 3515 Woodhaven Road, Philadelphia, Pennsylvania 19154
- Journal of Speech & Hearing Disorders, 9030 Old Georgetown Road, Washington, D.C. 20014
- Journal of Speech & Hearing Research, 9030 Old Georgetown Road, Washington, D.C. 20014
- Journal of Teacher Education, One Dupont Circle, Washington, D.C. 20036
- Language Speech & Hearing Services in Schools, 9030 Old Georgetown Road, Washington, D.C. 20014
- Lantern, Perkins School for the Blind, Watertown, Massachusetts 02172
- Learning, 1255 Portland Place, Boulder, Colorado 80305
- Man Society Technology, 1201 16th Street, N.W., Washington, D.C. 20036
- Mathematics Teacher, 1201 16th Street, N.W., Washington, D.C. 20036
- Mental Retardation, 5201 Connecticut Avenue, N.W., Washington, D.C. 20015
- Merrill Palmer Quarterly, 71 East Ferry Avenue, Detroit, Michigan 48202
- Momentum, Suite 350, One Dupont Circle, Washington, D.C. 20036
- Monday Morning, 55 York Street, Toronto 1, Ontario, Canada
- Music Educators Journal, 1201 16th Street, N.W., Washington, D.C. 20036
- NASSP Bulletin, 1201 16th Street, N.W., Washington, D.C. 20036
- National Elementary Principal, 1801 North Moore Street, Arlington, Virginia 22209
- The New Beacon, 224 Great Portland Street, London W1N 6AA, England
- New Outlook for the Blind, 15 West 16th Street, New York, New York 10011
- NTID Focus, One Lomb Memorial Drive, Rochester, New York 14623
- Notre Dame Journal of Education, P.O. Box 686, Notre Dame, Indiana 46556
- Nursing Outlook, 10 Columbus Circle, New York, New York 10019
- Optometric Weekly, 5 North Wabash Avenue, Chicago, Illinois 60602
- OSU Special Educator, Utah State University, Logan, Utah 84322
- Peabody Journal of Education, George Peabody College for Teachers, Nashville, Tennessee 37203
- Pediatrics, P.O. Box 1034, Evanston, Illinois 60204
- People Watching, 2852 Broadway, Morning-side Heights, New York, New York 10025
- Perceptual and Motor Skills, Box 1441, Missoula, Montana 59801
- Personnel & Guidance Journal, 1607 New Hampshire Avenue, N.W., Washington, D.C. 20009
- Phi Delta Kappan, 8th & Union Streets, Bloomington, Indiana 47401
- Physical Therapy, 1156 15th Street, N.W., Washington, D.C. 20005
- Pointer, P.O. Box 131, Syracuse, New York 13210
- Psychological Abstracts, 1200 17th Street, N.W., Washington, D.C. 20036
- Psychology in the Schools, 4 Conant Square, Brandon, Vermont 05733
- Psychology Today, P.O. Box 2990, Boulder, Colorado 80302
- Quarterly Journal of Speech, Speech Communication Association, Statler Hilton, New York, New York 10001

- Reading Research Quarterly, 6 Tyre Avenue, Newark, Delaware 19711
- Reading Teacher, 6 Tyre Avenue, Newark, Delaware 19711
- Rehabilitation Digest, 165 Bloor Street, East, Suite 303, Toronto 285, Ontario, Canada
- Rehabilitation Gazette, 4502 Maryland Avenue, St. Louis, Missouri 63108
- Rehabilitation Literature, 2023 West Ogden Avenue, Chicago, Illinois 60612
- Rehabilitation Teacher, 88 St. Stephen Street, Boston, Massachusetts 02115
- Remedial Education, 5 Netherlee Street, Glen Iris, Victoria, Australia 3146
- Review of Educational Research, 1126 16th Street, N.W., Washington, D.C. 20036
- Scandinavian Journal of Rehabilitation Medicine, Gamla Brogatan 26, Box 62, S-101 20 Stockholm 1, Sweden
- Schizophrenia, 56 West 45th Street, New York, New York 10036
- Schizophrenia Bulletin, 5600 Fishers Lane, Rockville, Maryland 20852
- School Applications of Learning Theory, 1819 East Milhan Road, Kalamazoo, Michigan 49003
- School Management, 866 Third Avenue, New York, New York 10022
- School Media Quarterly, 1201-1205 Bluff Street, Fulton, Missouri 65251
- School Psychology Digest, 311 Education Building, Kent State University, Kent, Ohio 44242
- School Safety, 425 North Michigan Avenue, Chicago, Illinois 60611
- Science and Children, 1201 16th Street, N.W., Washington, D.C. 20036
- Science Teacher, 1201 16th Street, N.W., Washington, D.C. 20036
- Sight Saving Review, 79 Madison Avenue, New York, New York 10016
- Slow Learning Child, St. Lucia, Brisbane 4067, Australia
- Social Service Review, 5801 Ellis Avenue, Chicago, Illinois 60637
- Social Work, 49 Sheridan Avenue, Albany, New York 12210
- Sociology of Education, 1001 Connecticut Avenue, N.W., Washington, D.C. 20036
- Sociometry, 1722 N Street, N.W., Washington, D.C. 20036
- Southern Journal of Educational Research, Box 107, Southern Station, Hattiesburg, Mississippi 39401
- Special Education in Canada, Parkway V S, 1 Danforth Avenue, Toronto, Ontario Canada
- Speech Monographs, Speech Communication Association, Statler Hilton Hotel, New York, New York 10001
- Speech Teacher, Speech Communication Association, Statler Hilton Hotel, New York, New York 10001
- Teacher, 22 West Putnam Avenue, Greenwich, Connecticut 06830
- Teacher of the Deaf, 50 Topsham Road, Exeter EX2 4NF, United Kingdom
- Teachers College Record, 525 West 120th Street, New York, New York 10027
- Teaching Exceptional Children, 1920 Association Drive, Reston, Virginia 22091
- Theory Information Practice, 149 Arps Hall, 1945 North High Street, Columbus, Ohio 43210
- Thrust for Education Leadership, 1550 Roelins Road, Burlingame, California 94010
- Training School Bulletin, Landis Avenue & Main Road, Vineland, New Jersey 08360
- Volta Review, 3417 Volta Place, N.W., Washington, D.C. 20007
- Young Children, 1834 Connecticut Avenue, N.W., Washington, D.C. 20009

Every effort is made to keep this list as up-to-date as possible; this list is current as of June 1974.

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ABSTRACT 137

EC 000 335 ED N.A.
 Publ. Date Mar 67
 Avery, Charlotte B.
Orthographic Systems Used in Education of the Deaf.
 John Tracy Clinic, Los Angeles, California
 Volta Review, Volume 69, 1967.
 EDRS Price 0

Descriptors: exceptional child research; aurally handicapped; instructional materials; professional education; deaf; orthographic symbols; teacher education; special schools; speech instruction; students; language arts; alphabets; Alcorn Symbols; International Phonetic Alphabet; Initial Teaching Alphabet; Northampton Charts; Thorndike Spellings

A survey was made of teacher training institutions and schools for the deaf to determine the systems of orthography most frequently used. Information was sought in the following systems Alcorn Symbols, International Phonetic Alphabet, Initial Teacher Alphabet, Northampton Charts, and Thorndike Spellings. Fifty-one teacher training centers and 75 school programs were contacted. Replies were received from 25 training centers and 68 schools. In frequency of use, the Northampton Charts ranked first and the Thorndike Spellings ranked second. Twenty of the 25 training centers used two or more systems. Two-thirds of the training students were also exposed to the Initial Teaching Alphabet, although only nine of the 25 centers are using it. Only 11 of the 68 schools for the deaf surveyed do not use the Northampton Charts. Educational materials produced for national consumption using the Northampton Charts and Thorndike Spellings should be expected to be of orthographic use to all but .004 percent of deaf pupils and all but .02 percent of students in training. Three tables present data. This article was published in The Volta Review, Volume 69, Number 3, pages 208-210, March 1967. (RS)

ABSTRACT 144

EC 000 636 ED N.A.
 Publ. Date Feb 66
 Duffy, John K.
Initial Teaching Alphabet and the Hearing Impaired Child.
 Brooklyn College Of City of New York, New York, Division Of Speech Pathology And Audiology, Dept. Of Speech
 EDRS Price 0
 Volta Review, Volume 68, 1966.

Descriptors: exceptional child education; aurally handicapped; children; hard of hearing; reading instruction; language instruction; speech instruction; initial teaching alphabet; alphabets; language development; deaf; preschool children; instructional materials

The Initial Teaching Alphabet (ITA) is recommended for use with young deaf children because it is a simple, logical, and carefully structured method associating only one sound with each sym-

bol. The ITA enables an interchange of auditory perception and spoken language with visual perception. Each reinforces the other. Reading, writing, speaking, and language will develop simultaneously. ITA materials can be adapted to techniques of individual teachers. Early diagnosis (ideally before age 1), adequate language stimulation, and intensive formal language instruction including the ITA (after age 2) will aid speech and language achievement. This article was published in The Volta Review, Volume 68, Number 2, pages 150-153, February 1966. (EB)

ABSTRACT 225

EC 000 430 ED N.A.
 Publ. Date Nov 66
 Sanford, Adrian B.
The Learner and the Printed Page--the Place of Graphics in a Learning System.
 Educational Dev. Corp., Palo Alto, Calif.
 American Annals Of The Deaf, Volume 3, 1966.
 EDRS Price 0

Descriptors: exceptional child education; aurally handicapped; reading; programed instruction; learning; reading skills; textbooks; textbook content; programed materials; programed texts; audioinstructional methods; visual learning; educational change; instructional materials

Learning to read is based on a sequence of (1) experiences with things of the actual world, (2) experiences with reflections of things of the actual world, and (3) experiences with symbols representing those actual things. Because the skill of reading is important in the current educational system and is an intricately involved skill, evidence of the effect of hearing impairment on conceptual growth is necessary. New techniques and materials have been developed. However, teaching must change first. Programing principles should be applied to the preparation of textual materials as a subsystem for learning. Present beginning reading textbooks test children rather than offer them learning experiences because there is no immediate knowledge of results. With programed materials, however, the learner becomes his own teacher. Similar experiences, specially programed, could be of value in educating the deaf. Six references are listed. This article was published in the American Annals of the Deaf, Volume 3, Number 5, pages 626-632, November 1966. (MW)

ABSTRACT 1269

EC 001 597 ED N.A.
 Publ. Date Sep 64
 Adler, Edna P.
Reading Out Loud in the Language of Signs; an Effective Way To Develop Reading Skills in the Illiterate or Functionally Illiterate Young Deaf Adult.
 Michigan Association For Better Hearing, East Lansing, Rehabilitation Center For Deaf Adults

EDRS not available
 American Annals Of The Deaf, V109
 N4 P364-6 Sept 1964

Descriptors: exceptional child education; aurally handicapped; reading; teaching methods; communication (thought transfer); deaf; sign language; fingerspelling; communication skills; manual communication; reading development; reading skills; illiterate adults; adults; adult education programs

An adult education course utilized sign language in combination with speech and fingerspelling to develop reading and thus to develop communication skills. The English language was taught to small groups of pupils by training them to read literary passages aloud and simultaneously signing and fingerspelling to convey the exact shades of meaning of the text. English grammar was drilled upon, supplemented by color coding. Sign recitation permitted instant detection and correction of any deviation from context and reinforced learning through the large amount of exposure to correctly read English. Although it was necessary to watch for vague or repetitious use of sign symbols used for words, reading out loud by signs in correct English helped counteract the sign habits of putting a noun before its modifier and of omitting words. (SN)

ABSTRACT 709

EC 001 434 ED N.A.
 Publ. Date May 67 3p.
 Larr, Alfred L.
Learning to Hear the Written Word.
 California State College, Long Beach, Speech And Hearing Clinic
 EDRS not available
 Hearing And Speech News; V35 N3
 P22-4 May 1967

Descriptors: exceptional child education; aurally handicapped; reading; beginning reading; children; hard of hearing; initial teaching alphabet; reading instruction

The Initial Teaching Alphabet (ITA) has advantages in helping hard of hearing children to read. The ITA supplies the need for a simple, consistent system based upon auditory symbols because it contains symbols for 44 sounds, 23 of which are identical to the orthographic (conventional) alphabet. The children therefore learn to think in terms of sounds, rather than just visual symbols, and lay a foundation for later speech fluency. A system of ITA has been developed which teaches rhythm of speech by capitalizing stressed syllables. The hearing handicapped child should be encouraged to make maximum use of amplification and to read aloud. The conventional alphabet symbols should be presented gradually. The ITA code helps the child develop kinesthetic awareness and enables him to get the feel of words as he sounds them out. It is hoped that widespread use of the ITA will help the hearing impaired child achieve higher levels of language and speech. Samples illustrating ease of reading are included. A reference lists nine items. (GD)

ABSTRACT 1523

EC 003 917 ED 029 425
 Publ. Date 67 86p.
 Trboyeovich, Goldie, Comp. And Others
A Bibliography: Easy Reading for Deaf Children.
 Tennessee University, Knoxville, Southern Regional Media Center For The Deaf
 Office Of Education (DHEW), Washington, D. C.
 EDRS mf, hc
 OEC-29-00235-0235

Descriptors: exceptional child education; aurally handicapped; annotated bibliographies; childrens books; reading materials; supplementary reading materials; fiction; reading level

An annotated bibliography of books for use by deaf children contains 312 selections. Selections are supplemental rather than basic, are designated as primary, intermediate, or advanced, include books published between 1960 and 1966, are marked E (easy) or F (fiction) or have Dewey classification numbers, and are marked for price. A title index and a subject index for nonfiction books are provided. (RJ)

ABSTRACT 1699

EC 004 018 ED 030 254
 Publ. Date Dec 68 57p.
 Restaino, Lillian C. R.
Identification, Assessment and Prediction of Reading Competency in Deaf Children. Final Report.
 Lexington School For The Deaf, New York, New York
 Office Of Education (DHEW), Washington, D. C., Bureau Of Research
 EDRS mf, hc
 OEG-32-42-0000-6032
 BR-6-1203

Descriptors: exceptional child research; aurally handicapped; reading ability; reading skills; reading difficulty; abstraction levels; memory; visual discrimination; serial ordering; linguistic competence; tests; visual perception; cognitive processes

To investigate the underlying factors of visual discrimination, memory, rule abstraction, language, and serial ordering in reading success, 79 poor and 65 good deaf readers were administered a battery of tests. Poor readers were deficient in lower-order visual discrimination and memory abilities; higher-order visual discrimination skills were important to success for good readers. Higher-order rule abstraction skills were important for continued progress by the relatively successful readers; however, lower-order rule abstraction was important to successful visual discrimination at initial levels of reading for poor readers as well. Successful rule abstraction was significant at all levels of reading; and visual discrimination (visual search and sequencing) was significant to the advanced reader for the processing of higher-level printed text. Implications were that rule abstraction is important at all levels of the reading process, visual discrimination activities at prereading

and higher reading levels should be re-evaluated, and investigation is needed to determine sentence structures that are obstacles to progress beyond intermediate levels of reading. (Author/RJ)

ABSTRACT 1159

EC 500 942 ED N.A.
 Publ. Date Jan 70 3p.
 Hargis, Charles H.
The Relationship of Available Instructional Reading Materials to Deficiency in Reading Achievement.
 EDRS not available
 American Annals Of The Deaf; V115 N1 P27-9 Jan 1970

Descriptors: exceptional child education; aurally handicapped; readability; reading materials; idioms; vocabulary; reading material selection

The article briefly discusses the problems involved with reading materials currently used for instructing deaf children. The basic reading texts have been designed with hearing children in mind and do not include sufficient provision for syntax, figurative language, and idiom. The author feels that too often teachers of the deaf attempt to force the child to learn the reading material rather than adjust the material to the child, and that new materials designed specifically for the deaf must be created. (JM)

ABSTRACT 1279

EC 003 108 ED 003 846
 Publ. Date 64 49p.
 Flowers, Arthur
Central Auditory Abilities of Normal and Lower Group Readers.
 New York State University, Albany
 Office Of Education (DHEW), Washington, D. C.
 EDRS mf, hc
 CRP-S-076

Descriptors: exceptional child research; aurally handicapped; tests; reading; identification; auditory perception; perception tests; audition (physiology); auditory discrimination; reading achievement; diagnostic tests; phonics; perceptual development; auditory tests; auditory evaluation; mentally handicapped; minimally brain injured; reading ability; reading difficulty; Stanford Achievement Test; California Mental Maturity Scale; Peabody Picture Vocabulary Test

The goals of the reported research were to evaluate the hearing in early elementary school aged children in a regular public school program to compare the auditory and perceptual abilities of children who can and children who cannot do the normal reading for their grade, and to search for relations between reading achievement and central auditory skills. Subjects were selected from third grade public school children and were divided into a control group (normal reading) and an experimental group (low reading), each group consisting of 41 subjects. Selection criteria were based on performance scores for the Stanford Achievement Test, the California Mental Maturity Scale, and the Peabody Picture Vocabulary Test. Subjects were tested under conditions of low

pass filtered speech, accelerated speech, dual distortion, and competing messages. Results demonstrated significant correlation between reading achievement and auditory abilities which indicated that measures of central hearing may be of prognostic value relative to future reading achievement or disability. The findings suggested that tests of central auditory abilities may make possible early identification of children who will experience difficulty in phonics learning during the reading readiness program, and the competing messages technique might be useful in evaluating the central mechanism of hearing of children considered to be mentally handicapped or brain damaged. (WB)

ABSTRACT 1541

EC 000 418 ED N.A.
 Publ. Date Nov 65 6p.
 Karlsen, Bjorn
A Research Basis for Reading Instruction of Deaf Children.
 Minnesota University, Minneapolis, Department Of Special Education
 Office Of Education (DHEW), Washington, D. C.
 EDRS not available
 American Annals Of The Deaf; V110 N5 P535-40 Nov 1965
 Paper Presented At The Symposium On Research And Utilization Of Educational Media For Teaching The Hearing Impaired (Lincoln, Nebraska, May 23-25, 1965).

Descriptors: exceptional child research; aurally handicapped; reading instruction; reading materials; visual learning; visual stimuli; teaching machines; programmed instruction; educational methods; language instruction; Honeywell University of Minnesota Instructional Device

Support for a visual approach to teaching reading to deaf children and reviews of past research on reading instruction methods are presented. The visual method employs a newly developed teaching machine called the Honeywell-University of Minnesota Instructional Device, which has a three choice response system and is fully automatic with no auditory stimulus used. Phonetic color coding is used with fading techniques to diminish clues. Concept development including vocabulary, sentence structure, multiple meanings and idioms is stressed, and progress is measured by the child's performance with the machine. A first pilot study during the summer of 1964 was tried with nine prelingual deaf 5 and 6 year olds indicating favorable results, and a final report was to be available on August 31, 1966. (MW)

ABSTRACT 1585

EC 501 054 ED N.A.
 Publ. Date Apr 70 6p.
 Hartung, Joseph E.
Visual Perceptual Skill, Reading Ability, and the Young Deaf Child.
 EDRS not available
 Exceptional Children; V36 N8 P603-8 Apr 1970

Descriptors: exceptional child research;

aurally handicapped; visual perception; reading ability; visual stimuli; skill development; beginning reading

The purpose of this study was to evaluate visual perceptual skills of beginning readers. Greek and English trigrams were presented tachistoscopically to deaf and normally hearing children to test their ability to recognize single symbols and recall trigrams. The performance of the two groups of children was essentially the same on recognition tasks but the normally hearing children performed significantly better on the recall task. The results suggest different processing strategies by the two groups of children. (Author)

ABSTRACT 3565

EC 006 140 ED 042 298
Publ. Date Dec 69 174p.

Scherer, Patricia A.

Visual Learning Processes in Deaf Children. Final Report.

Northwestern University, Evanston, Illinois

Office Of Education (DHEW), Washington, D. C., Bureau Of Education For The Handicapped

EDRS mf,hc

OEG-3-6-068664-1595

BR-6-8664

Descriptors: exceptional child research; aurally handicapped; reading; teaching methods; reading instruction; lipreading; deaf education; language development

To compare three processes for teaching deaf children to read, 54 deaf children (ages six, eight, and 10 years) were matched according to age, sex, hearing level, intelligence, socioeconomic level, and reading abilities, and were randomly assigned to one of three groups. Group A subjects were given a stimulus which consisted of the read form, the speechread form, and an illustrative picture. Group B presentation included only the read word and a picture. Group C subjects were given the read word and the speechread word. A filmed teaching machine procedure was used (10 presentations over two weeks). A battery of posttests measured changes in learning among 27 variables. Results showed Situation A superior to B on Sentence and Paragraph Comprehension in reading (no differences between B and C). Group A was superior to C in speechreading and error scores, indicating that all three cues (read form, speechread form, and picture) provided for most effective learning, and that speechreading is a noteworthy factor in learning to read. Appendixes include the film format, tests of word recognition, sentence comprehension, and paragraph comprehension, and a bibliography. (KW)

ABSTRACT 4

EC 03 0004 ED N.A.
Publ. Date 70 7p.

Rush, Mary Lou

Problems in Teaching Concepts: A Programmer's View.

EDRS not available

Teaching Exceptional Children; V2 N4

P176-80, 185-6 Sum 1970

Descriptors: exceptional child education; aurally handicapped; programed instruction; concept formation; word recognition; teaching methods; language development

Presented are some considerations which must be taken into account when programing, or teaching, concepts. Problems encountered and solutions adopted when developing language programs for deaf students to be used on teaching machines are described. Aspects covered include the focusing of attention (cuing techniques for written words and for pictures), recognizing differences in word configuration, recognizing a concept in different visual forms (lipread message, written and pictorial forms), spatial (visual stimuli) versus temporal (auditory stimuli) dimensions of language, and frame design. (KW)

ABSTRACT 512

EC 03 0512 ED 015 603
Publ. Date 66 132p.

Karlsen, Bjorn

Teaching Beginning Reading to Hearing Impaired Children, Using a Visual Method and Teaching Machines. Final Report.

Minnesota University, Minneapolis

Office Of Education (DHEW), Washington, D. C.

EDRS mf,hc

OEG-7-33-0400-230

BR-1204

University Of Minnesota Bookstore, Minneapolis, Minnesota 55455.

Descriptors: exceptional child research; aurally handicapped; reading materials; teaching methods; beginning reading; teaching machines; programed instruction; reading instruction; programed materials; Honeywell University of Minnesota Teaching Device (HUMID)

To teach beginning reading to hearing impaired children through visual presentations, the project designed and built a teaching machine, generated programs, and tested the system (Honeywell University of Minnesota Teaching Device or HUMID). Programs incorporated various techniques and new approaches. To test one of the programs with deaf and hard of hearing children, a group of 10 first graders and a group of 9 and 10 year old students from a remedial class were taught 34 programs. Control groups were also formed. Results of a test on the concepts of the programs showed the first grade experimental group scored significantly better (at the .01 level) than its control group; the remedial experimental group scored better (not significantly) than its control group. On standardized tests the first grade experimental group approached a difference of statistical significance with scores higher than their control group, but no significant differences were found between the remedial experimental and control groups. Additional studies are reported. It was concluded that an automated system to teach reading non-orally can be developed and that teaching

machines have a place in classrooms for the deaf. (MS)

ABSTRACT 1574

EC 03 1574 ED 046 210
Publ. Date Aug 70 489p.

Silverman-Dresner, Toby; Guilfoyle, George R.

The Deaf Child's Knowledge of Words: Volume I. Final Report.

Lexington School For The Deaf, New York, New York

Office Of Education (DHEW), Washington, D. C., Bureau Of Research

EDRS mf,hc

OEG-0-8-000419-1792

BR-7-0419

Descriptors: exceptional child research; aurally handicapped; vocabulary; word recognition; vocabulary development; reading tests

To assess the reading vocabulary knowledge of deaf children, a vocabulary pool of 14,852 words was reduced to 7,300 words. These words were fed into a computer to produce 73 sets of 100 randomly selected words each. The 73 sets were converted into vocabulary tests which were randomly administered, two per child, to 13,207 deaf students, ages 7-17 years, in 89 schools for the deaf in the United States. Results indicated that girls, in general, seem to know more words than do boys, and that older children seem to know more words in common than do younger ones. The major portion of the report consists of a list of the 7,300 words, with definitions, and with the percentages of children in each of five age groups who knew the word. A summary of words known by 67% of deaf children at the various age levels is also presented. Appended are statistical characteristics, such as times administered and mean scores, of the 73 test forms, and statistics on the frequency of occurrence and percentage of correct responses for each of the 7,300 words for the total group of subjects and for just the 7-year-old subjects. Appended information continues in Volume 2 of the report (see EC 031 575), which includes an alphabetical list of the test forms and instructions to teachers for test administration. (Author/KW)

ABSTRACT 1575

EC 03 1575 ED 046 211
Publ. Date Aug 70 747p.

Silverman-Dresner, Toby; Guilfoyle, George R.

The Deaf Child's Knowledge of Words: Volume II, Alphabetical List of Test Items. Final Report.

Lexington School For The Deaf, New York, New York

Office Of Education (DHEW), Washington, D. C., Bureau Of Research

EDRS mf,hc

OEG-0-8-000419-1792

BR-7-0419

Descriptors: exceptional child research; aurally handicapped; vocabulary; word recognition; vocabulary development; reading tests

The document is the second volume of a

report providing descriptive data on the reading vocabulary of deaf children ages 8-17 years, which resulted from a study assessing the reading vocabulary knowledge of 13,207 deaf students. Volume 2, continuing the appendix begun in Volume 1, contains an alphabetical list of the 7,300 words used on the 73 forms of the vocabulary test, with their definitions and decoys, for instructors who may wish to test children on particular words. Brief instructions for test administration are given. (KW)

ABSTRACT 748

EC 04 0748 ED N.A.
 Publ. Date Nov 71 26p.
 Van Uden, M. J.
How to Teach Deaf Children to Read Intelligently.
 EDRS not available
 Teacher of the Deaf; V69 N410 P373-98
 Nov 1971

Descriptors: exceptional child education; aurally handicapped; reading difficulty; reading comprehension; reading ability; language development; teaching methods

Various studies are cited illustrating poor reading ability among older deaf students. It is shown that many deaf students have not progressed from the vocabulary phase (guessing based on vocabulary knowledge) to the structural phase (knowledge of language system) in learning to read intelligently. Analyzed are some of the special difficulties in reading experienced by deaf students. Overlooking mistakes due to lack of vocabulary, reading difficulties are seen to fall into four categories: wrong interpretation of words, connotative and denotative; incorrect grouping of words; inability to understand pretending, the figurative meaning, the conjugative meaning; and inability to reorganize logical order. Particularly difficult words are pointed out, as are other basic difficulties affecting reading (inability to put oneself in someone else's place, lack of flexibility in thinking and imagining). Principles related to and methods for encouraging and teaching language and reading to deaf children are discussed, beginning with preschool home training and proceeding through the vocabulary phase to the structural phase of reading. (KW)

ABSTRACT 1785

EC 04 1785 ED N.A.
 Publ. Date May 72 2p.
 Anderson, Norman O.; Laird, Roderick D.
Teaching the Deaf Child to Read.
 EDRS not available
 Audiovisual Instruction; V17 N5 P19-20
 May 1972

Descriptors: exceptional child education; aurally handicapped; reading; language instruction; visual learning; teaching methods; visual stimuli; instructional media

Language acquisition of normal and deaf children is discussed and related to the teaching of reading to deaf students. This teaching is seen to be of necessity modified significantly because of the absence of the broad auditory input base

which hearing children have. Described is a multimedia approach to teaching reading (language) to the deaf in which a visual input is presented first and then tied to the language in print, rather than vice versa (evocation of visual images by the print matter). A diagram shows the steps involved in this mediated visual-to-print approach. (KW)

ABSTRACT 1800

EC 04 1800 ED N.A.
 Publ. Date May 72 13p.
 Hamp, N. W.
Reading Attainment and Some Associated Factors in Deaf and Partially Hearing Children.
 EDRS not available
 Teacher of the Deaf; V70 N413 P203-15
 May 1972

Descriptors: exceptional child research; aurally handicapped; reading ability; performance factors; surveys; reading tests

The article describes a new test of reading ability constructed and standardized by the writer on a large sample of hearing children. The test can be used to measure the reading attainment of deaf or partially-hearing children. A survey of reading attainment and some of the associated factors bearing on the reading ability of 367 hearing impaired children was carried out with the 9-16 year olds in eight schools. The investigation examined the relationship of reading attainment to the factors of degree of hearing loss, age, sex, intelligence, type of education, social class, parent's attitudes to education, and abnormal home background. It is stressed that the low reading standards observed are a direct reflection of the very serious language deficiency almost universally encountered in severely deaf children and to a lesser degree in the partially-hearing. (Author)

ABSTRACT 2794

EC 04 2794 ED 066 847
 Publ. Date Apr 72 31p.
 Zakia, Richard D.
Fingerspelling and Speechreading as Visual Sequential Processes.
 EDRS mf, hc

Descriptors: exceptional child research; aurally handicapped; finger spelling; speech skills; reading ability; undergraduate study; college students; sequential learning; visual perception

The pamphlet focused first on questions concerned with the relative ability of deaf and hearing students to visually process words when presented letter by letter, and with relationships existing among deaf students between the ability to process words presented tachistoscopically, letter by letter, and the ability of the same students to process words through finger spelling and through speech reading. Then reported was a study involving 33 deaf and 19 hearing students at the post secondary level in which the processing of verbal information (words) visually and the relationship of the deaf students' ability to identify words presented in rapid letter-by-letter graphic sequence and ability to read fin-

ger spelling and to speech read were investigated. A comparison of the relative ability of deaf and hearing post secondary subjects to correctly identify printed meaningful words when their letters were presented sequentially indicated that the deaf subjects were superior under all conditions tested. Lack of a statistically significant correlation between the ability to read printed words whose letters are presented sequentially, and to read words formed by speech suggested that the perception of these two tasks was different. (Author/CB)

ABSTRACT 2852

EC 04 2852 ED 065 970
 Publ. Date 72 113p.
A Bibliography of Reading for Deaf Children.
 Media Services and Captioned Films Branch, DES
 EDRS mf, hc

Descriptors: exceptional child education; aurally handicapped; annotated bibliographies; reading; reading materials; kindergarten; elementary education; secondary education

The annotated bibliography of reading materials for deaf children contains approximately 630 entries said to have been selected on the basis of the following criteria: selections are supplemental rather than basic; grade span is kindergarten through twelfth grade, although emphasis is on kindergarten through sixth grade with selections designated as primary, intermediate, or advanced, based on evaluator's knowledge of reading abilities of deaf children; and prices indicated are taken from the 1970 and 1971 Books in Print and are subject to change. Entry information includes author, title, illustrator if other than author, price, annotation, suggested Dewey classification numbers and/or marked easy or fiction, and approximate grade level. Publication dates on entries range generally from 1961 to 1971. (CB)

ABSTRACT 1420

EC 05 1420 ED 073 609
 Publ. Date (72) 20p.
Project LIFE--Language Improvement to Facilitate Education: A Multimedia Instructional System for the Deaf Child.
 National Education Association, Washington, D. C.
 Bureau of Education for the Handicapped (DHEW/OE), Washington, D. C.

EDRS mf, hc

Descriptors: exceptional child education; aurally handicapped; language handicapped; programed instruction; programed materials; learning disabilities; instructional materials; reading readiness; language instruction; curriculum development; curriculum design; curriculum evaluation; program development; program design; films; filmstrips; Project LIFE (Language Improvement to Facilitate Education)

Explained are the program development, evaluation, validation, and dissemination procedures of Project LIFE (Language

Improvement to Facilitate Education), a series of programmed instructional materials for language handicapped children, especially hearing impaired children. Project LIFE is said to employ a series of visual perceptual filmstrips and a thinking activities series to teach the pre-skills necessary for a child to experience success in the language/reading program. The language/reading program is designed to teach vocabulary, sentence structures, and more sophisticated language structures in units focusing on general topical themes (self, animals, food, playthings, activities, clothing, shelter, history, travel, and pollution control). All instructional areas of the LIFE system are said to be accompanied by stated purposes and behavioral objectives, and to provide the conceptual base and framework on which the major pedagogic concepts for subsequent lessons are based. Programed filmstrips in visual perception, thinking activities, and language/reading are identified as the core program components, while supplemental components are said to include software such as story booklets, single concept flash cards, picture dictionaries, transparencies, and teacher guides. It is explained that evaluation and validation data are drawn from 52 field test centers each academic year, and that the program is disseminated by a commercial distributor. (GW)

ABSTRACT 1425

EC 05 1425 ED 074 653
 Publ. Date (72) 43p.
 Spidal, David A.
A Comparison of the Project LIFE Vocabulary with a Functional Basic Word List for Special Pupils.
 National Education Association, Washington, D. C.
 Bureau of Education for the Handicapped (DHEW/OE), Washington, D. C.

EDRS mf, hc
 Project LIFE Report 73-1

Descriptors: exceptional child education; aurally handicapped; learning disabilities; instructional materials; vocabulary; instructional media; Project LIFE (Language Improvement to Facilitate Education); A Functional Basic Word Listing for Special Pupils

Vocabulary used in the Language Improvement to Facilitate Education (LIFE) program is compared with the vocabulary used in A Functional Basic Word Listing for Special Pupils (FBWLSP). The vocabulary of the LIFE program is said to have been chosen on the basis of several language curriculum guides from schools for the deaf, the E. Thorndike and I. Lorge word list, the Dolch Basic Sight Vocabulary, and many consultants. The FBWLSP is said to consist of 2,483 words divided into elementary, intermediate, and advanced levels of difficulty. The combined total match of the Project LIFE vocabulary words with the special listing of vocabulary for special students on the three levels of LIFE materials was reported to be 90%. Words included in the Project

LIFE materials which do not appear in the basic word list are thought to be those referring to important components of the child's everyday activities at home and at school. The differences between the two lists are said to reflect the fact that the LIFE materials are designed to teach functional language, while the basic word list is more directed toward the child's reading of already developed materials. Appendixes include listings of references for language planning, language grids from Project LIFE, and an alphabetical listing of Project LIFE vocabulary. (GW)

ABSTRACT 2428

EC 05 2428 ED N.A.
 Publ. Date Aug 73 8p.
 McCarr, Dorothy
Individualized Reading for Junior and Senior High School Students.
 American Annals of the Deaf; V118 N4 P488-95 Aug 73

Descriptors: exceptional child education; aurally handicapped; secondary school students; reading; individualized instruction; academic achievement

An individualized reading program was set up at the Oregon State School for the Deaf for 68 hearing impaired students in grades 7-12. More than 75 selections of materials were available to the students. An individual folder was maintained by each student to record materials used and progress made. The Iowa Reading Test was administered three times during the school year; September, January, and May. The average class gain for this period was 1.3 compared to a .3 to a .5 in previous years. (Also included is an annotated bibliography with sources of approximately 80 motivational reading materials for the reluctant reader.) (Author/DB)

ABSTRACT 2430

EC 05 2430 ED N.A.
 Publ. Date Aug 73 8p.
 Caldwell, Doris Cooper
Use of Graded Captions with Instructional Television for Deaf Learners.
 American Annals of the Deaf; V118 N4 P500-7 Aug 73

Descriptors: exceptional child research; aurally handicapped; deaf; adolescents; educational television; video tape recordings; sequential learning; reading; Captions

Two science classes with 17 adolescents in the intermediate department of the Tennessee School for the Deaf comprised the sample population for an experiment in captioning videotapes for deaf learners. All subjects were prelingually and severely or profoundly deaf and all were retarded readers. The reading achievement mean of the control group was more than one full grade higher than that of the experimental class. The control group received easy captions (short words, simple sentences) which attempted only to transmit basic subject information. Captions for the experimental group were additional exercises in developmental reading and language

fluency. Teacher intervention was removed during presentations of the second unit in order to test three hypotheses related to the two sets of captions. The results yielded information on achievement potential when captions are written with grammatical and semantical precision at graded reading levels to build reading and communication skills. (Author)

ABSTRACT 2582

EC 05 2582 ED N.A.
 Publ. Date Sep 73 13p.
 Peters, Nathaniel; Peters, Juanita
Better Reading Materials for the Content Areas: Criteria for Better Use and Annotated Bibliography.
 Volta Review; V75 N6 P375-87 Sep 1973

Descriptors: exceptional child education; aurally handicapped; elementary school students; secondary school students; teaching methods; annotated bibliographies; reading; reading materials

Suggested are guidelines for effective use of reading materials which are appropriate for teachers of hearing impaired students, and also included is an annotated bibliography listing over 300 instructional materials. Teachers are advised to avoid misuse and/or overuse of the better reading materials now available in many subject areas by assessing each student's instructional reading level and evaluating written materials to be used. The bibliography describes and evaluates materials for reading development in terms of reading level, skill content, publisher, and price. It is reported that bibliographies listing materials in areas of social studies, consumer education, language development, and guidance will be published in subsequent issues of the Volta Review. (Authors/MC)

ABSTRACT 480

EC 06 0480 ED N.A.
 Publ. Date Nov 73 6p.
 Conrad, R.
Internal Speech in Profoundly Deaf Children.
 EDRS not available
 Teacher of the Deaf; V71 N422 P384-89 Nov 1973

Descriptors: exceptional child research; aurally handicapped; deaf; secondary school students; speech habits; speech skills; recall (psychological); memory; word recognition; Internal Speech

Thirty-one profoundly deaf secondary school students and 16 normally hearing children were shown two sets of words presented one at a time on flash cards in two sessions to distinguish deaf from hearing children and to determine whether a deaf or hearing child uses internal speech when reading words to be remembered. The hearing children recalled more of the unlike-sounding words whereas the deaf children recalled more of the like-sounding words. In a posttest session several months later, 21 of 24 deaf children continued to recall more like-sounding words, and five of six deaf children still recalled unlike-sounding words. Results indicated that an error

rate of about 30% wrong words seemed to be the maximum for reliable assessment. (MC)

ABSTRACT 1938

EC 06 1938

ED N.A.

Publ. Date May 74

22p.

Skilling, Sheila M.

A Series of Work Books for Infants and Juniors Or The Question Books.

Teacher of the Deaf; V72 N425 P165-86
May 1974

Descriptors: exceptional child education; aurally handicapped; deaf; early childhood; childhood; books; basic reading;

reading materials; teacher developed materials

Described with excerpts from the texts and accompanying illustrations are 40 books written by a teacher in England for deaf children in elementary school. It is noted that the books are written for six levels and can be used in class, for individual readers, or as workbooks requiring written answers from children working alone. Explained are concepts used in five infant 1 books, each with 16 pages and four questions involving 21 nouns such as bird and 10 colors; five

infant 2 books, each with 14 pages and content comprised of the numbers 1 through 6 in addition to words; three infant 3 books, each with 14 pages and more complex language. Discussed are development and subject matter of nine junior 1 books, each with 40 pages, five questions, and 40 to 50 words; nine junior 2 books, each with 19 pages and 29 to 39 words; and nine junior 3 books, each with 40 pages and 54 to 70 words. Examples of texts are given to be 'the pear is yellow' (from the infant 1 green book) and 'what is in the bowl?' (from the junior 3 green book). It is reported that teachers and children find the books useful and enjoyable. (MC)

ABSTRACT 260

EC 002 102 ED 018 054
 Publ. Date May 67 16p.
 Foulke, Emerson; Warm, Joel
The Development of an Expanded Reading Code for the Blind. Interim Technical Report.
 Louisville Univ., Kentucky
 OEC-6-10-035
 EDRS Price 0.25;0.72

Descriptors: exceptional child research; visually handicapped; braille; tactual perception; sensory experience; sensory training; performance factors; redundancy; blind; reading

Groups of 24 blind adults (all skilled braille readers) and 24 sighted college students were compared on a tactual identification of form task in which raised dots were used. The two information parameters, complexity and redundancy of the dots, were assessed using punctiform metric figures resembling histograms and similar in size and spacing to standard braille dots. The task was to decide which, if either, of the two comparison stimuli was identical to the standard stimulus. A 4 x 2 x 2 factorial design was employed. Statistically significant results were found between the visual status groups, between levels of complexity, and between random and redundant figures (p is less than .01 in each case). Also, the interactions between groups and complexity, groups and type of figures, and complexity and type of figures were found to be statistically reliable (p is less than .01) in each case. Findings indicated that efficiency of performance tends to decline with increments in stimulus complexity. The overall trend toward greater efficiency of performance with random than with redundant figures was found to accord with previous findings regarding the variables of the information parameters using visual stimuli. The conclusion was that the information handling approach taps a single process of form perception in man. The study also suggests revision of the present braille code to expand its 2 x 3 braille matrix to a 4 x 4 size for increased braille reading rate and accommodation of technical symbols in various sciences. Diagrams showing samples of cell matrices of different complexity and metric figures using braille dots and a graph showing performance differences are included. A bibliography lists 18 items. (KH)

ABSTRACT 452

EC 001 179 ED 015 605
 Publ. Date 66 119p.
Biennial Conference of the American Association of Instructors of the Blind (48th, Salt Lake City, June 26-30, 1966).
 American Assn. Of Instructors Of The Blind, Washington, D. C.
 EDRS Price 0.50;4.84

Descriptors: exceptional child research; reading; teaching methods; braille; visually handicapped; blind; partially sighted; educational research; multiply handicapped; adolescents; children; libraries;

conference reports; library services; mobility aids; preschool children; preschool programs; reading improvement; reading instruction; reading machines; sensory aids; visually handicapped mobility; instructional materials; speech compression; secondary school students; visual stimuli; visually handicapped orientation

The theme of the convention was Research--Key to Progress, and papers were delivered in the following areas--(1) research on the teaching of reading and improving reading skills, (2) research on independent living skills and orientation, mobility, and travel, (3) research on the child with limited but useful vision, (4) research on the multi-handicapped child, and (5) research on listening, technical devices, and teaching methods. Special papers and reports were given on (1) philosophy and goals of a preschool program, (2) how shall we serve our visually handicapped preschool children, (3) libraries and library services for visually handicapped, and (4) enrichment through a touch and learn center. Presidential, committee, and business reports are included. (MU)

ABSTRACT 569

EC 000 235 ED 021 345
 Publ. Date 63 51p.
 Bateman, Barbara D.
Reading and Psycholinguistic Processes of Partially Seeing Children. CEC Research Monograph, Series, A, Number 5.
 Council For Exceptional Children, Washington, D. C.
 EDRS mf
 The Council For Exceptional Children, 1201 Sixteenth Street, N. W., Washington, D. C. 20036 (\$2.00).

Descriptors: exceptional child research; visually handicapped; language; reading; partially sighted; psycholinguistics; visual acuity; reading speed; reading achievement; reading comprehension; grade 1; grade 2; grade 3; grade 4; language tests; language ability; language learning levels; intelligence; mental age; vision; reading tests; Illinois Test of Psycholinguistic Abilities; ITPA

To investigate the effects of visual defect on the reading and psycholinguistic processes, results were obtained for partially seeing children (grades 1 to 4, mean IQ 100) on the Monroe Reading Examination, Gates Speed and Accuracy Tests, Illinois Test of Psycholinguistic Abilities (ITPA), and Stanford-Binet Intelligence Scale. Reading scores were below grade level for grade 4 and at grade level for grade 3, lowest on oral reading and highest on the Gates comprehension tests, and below average for mental age, grade placement, and reading speed, but higher than average in accuracy. IQ was related positively with reading in relation to grade level, but negatively with reading in relation to mental age. The subjects made no excessive errors of any kind; error types and the degree of visual defect did not differ significantly. However, children with re-

fractive defects read less well than the other subjects. On the ITPA, the subjects performed significantly less well than normals on visual decoding, motor encoding, visual-motor sequential, and visual-motor association subtests, but did not differ on the auditory-vocal channel subtests. ITPA performance was related to eye condition only through the indirect effect of visual acuity. Reading achievement was positively correlated with the three ITPA subtests at the automatic-sequential level. Eight figures, 12 tables, four case histories, and 32 references are provided. (JD)

ABSTRACT 860

EC 000 937 ED 014 831
 Publ. Date 18 Nov 66 90p.
Braille Research and Development Conference Proceedings (Massachusetts Institute of Technology, Cambridge, November 18, 1966).
 Sensory Aids Evaluation Development Center, Cambridge, Massachusetts
 EDRS mf,hc

Descriptors: exceptional child research; visually handicapped; braille; computers; blind; media research; computer programs; conference reports; electronic equipment; machine translation; partially sighted; production techniques; programming; reading research; reading speed; research projects; tactual perception; conference reports; Sensory Aids Evaluation and Development Center; Brailletran

The conference papers include: a study of braille production, distribution, and use by Louis Goldish; automated braille and the profession of programming for the blind by Theodor D. Sterling; brailletran, a comprehensive braille transcription program by John J. Boyer; small computers and grade 2 braille by Edward L. Glaser; reading and reading braille by A. P. Brunwald; computer translation of grade 2 braille by Robert Haynes; braille research at George Peabody College by Richard W. Woodcock; the effects of pattern complexity and redundancy on the tactual recognition of metric figures by Emerson Foulke and Joel Warm; computer programming and the blind by Donald Bishop; computer production of braille at the Royal National Institute for the Blind by Clive Windebank; computer conversion of compositors tapes to grade 2 braille by Ann and Joseph Schack; braille embosser and display systems by Dwight M. Baumann; and advances in braille embossing by Ray E. Morrison. (CG)

ABSTRACT 1073

EC 002 672 ED 023 229
 Publ. Date 14 Oct 64 15p.
 Kederis, Cleves J. And Others
Training for Increasing Braille Reading Rates. Final Report.
 American Printing House For The Blind, Louisville, Kentucky
 Vocational Rehabilitation Administration (DHEW), Washington, D. C.
 EDRS mf,hc
 VRA-RD-1086S-63

Descriptors: exceptional child research;

visually handicapped; reading; braille; motivation; tachistoscopes; reading speed; reading comprehension; pacing; reading tests; teaching machines; test results; positive reinforcement

Two studies used controlled exposure devices in attempts to improve braille reading. The three null hypotheses tested were that reading practice under controlled exposure does not increase reading rates, any increase will not be maintained, and no differences in comprehension occur because of practice. Subjects were selected by the Gates Basic Reading Test and randomly assigned to experimental and control groups. The first group of three subjects in grades 6 to 12 was divided into fast, average, and slow readers at each of three grade levels, while the second study chose the 16 highest and 16 lowest scorers. The first study trained the experimental subjects in 22 half-hour sessions on consecutive days with the tachistotactometer, and reading test forms were administered one month prior to training, immediately following training, and 1 to 2 months after training. In the second study, experimental subjects practiced paced reading (with attempted increases of two and one-half words per minute each day) for 20 half-hour sessions on consecutive days, using two books with vocabulary grade levels 5 to 9 and 7 to adult on the IBM Braille Reading Machine. The null hypotheses were confirmed in both studies. Significant reduction in reading time occurred on the motivated tests in both studies (p less than .001 and p less than .01 respectively) in all the experimental and control groups. (DF)

ABSTRACT 1687

EC 003 930 ED 030 242
Publ. Date Feb 69 27p.
Educational Aids for Visually Handicapped.

American Printing House For The Blind, Louisville, Kentucky
Office Of Education (DHEW), Washington, D. C., Bureau Of Education For The Handicapped
EDRS mf, hc

Descriptors: exceptional child education; visually handicapped; instructional materials; sciences; braille; catalogs; reading; handwriting; sensory aids; deaf blind; electronic equipment; games; social studies; typewriting; health education; language arts; mathematics; mobility aids; audio equipment; music magnification methods; paper (materials); physical education; cooking instruction; sewing instruction; preschool education; industrial arts

Listings specifying source and cost are provided of tactile aids and materials designed for the visually handicapped. Items are presented in the following categories: supply sources and catalogs for aids; braille devices, including duplicators, reading and writing aids, reading readiness materials, and writing machines, slates, and styluses; deaf blind aids; electronic devices; games, including general and card games, chess and

checkers, and puzzles; mobility aids; optical aids and instruments; paper and binders; personal aids; preschool devices and materials; reading aids; and recording and sound equipment. Additional categories of listings are in the subject areas of geography and social studies, handwriting and typewriting, health education, language arts, mathematics (general, counting, geometric, linear measurement, slates, and time), music, physical education, practical arts (cooking and sewing), science, and vocational education (industrial arts). (JD)

ABSTRACT 1694

EC 003 987 ED 030 249
Publ. Date Jun 69 178p.
Nolan, Carson Y.; Kederis, Cleves J.

Perceptual Factors in Braille Word Recognition.

American Printing House For The Blind, Louisville, Kentucky, Department Of Educational Research
National Institute For Neurological Diseases And Blindness, Bethesda, Maryland
EDRS not available

American Foundation For The Blind, Inc., 15 West 16th Street, New York, New York 10011 (\$3.00).

Descriptors: exceptional child research; visually handicapped; braille; word recognition; tactual perception; research reviews (publications); readability; context clues; orthographic symbols; reading speed; slow learners; training

A description of braille and a review of research on this topic are discussed. Summaries are presented of nine research studies which are also presented in full; conclusions and duplication of the research are considered. The nine reports cover the following topics: effects of word length, familiarity, and orthography, influence of numbers and position of dots, and influence of braille contractions on recognition thresholds; effects of context on recognition thresholds for words varying in length, familiarity, and orthography; effects of context on recognition times for the stimulus words of the second study; effects of familiarity, length, and orthography on the recognition thresholds of braille words at the elementary school level; braille word recognition by low intelligence readers; and the effect of character recognition training on braille reading. Appendixes include stimulus words used in the studies, stimulus words for Study 5 in context, and a short story with stimulus words in italics. (RJ)

ABSTRACT 1506

EC 005 047 ED 030 634
Publ. Date (65) 81p.

Horn, Thomas D.; Ebert, Dorothy J.

Books for the Partially Sighted Child.

National Council Of Teachers Of English, Champaign, Illinois
EDRS mf

National Council Of Teachers Of English, 508 South Sixth Street, Champaign, Illinois 61820 (Stock No. 42304, HC \$1.00).

Descriptors: supplementary reading materials; annotated bibliographies; bibliographies; childrens books; elementary education; literature; reading difficulty; reading materials; visually handicapped; partially sighted

This annotated bibliography of books selected according to typography, type of illustration, and literary worth is intended to meet the need for a high-interest supplementary reading list for partially sighted children in grades 1-8. The books are divided into three sections, non fiction, fiction, and easy books, and are grouped according to subject areas. Notations include information about price, type size, type face, leading, and approximate grade level. (MP)

ABSTRACT 1769

EC 004 825 ED 035 148
Publ. Date Sep 69 35p.
Harley, Randall K.

Comparison of Several Approaches for Teaching Braille Reading to Blind Children. Final Report.

George Peabody College For Teachers, Nashville, Tennessee
Office Of Education (DHEW), Washington, D. C., Bureau Of Education For The Handicapped
EDRS mf, hc
OEG-2-7-002975-0453
BR-6-2975

Descriptors: exceptional child research; visually handicapped; braille; reading instruction; blind; partially sighted; program development; program evaluation; instructional materials; reading materials; beginning reading; research needs; initial teaching alphabet

To develop and test materials to be used in a later 2-year study to compare six approaches in teaching braille reading, materials in grade 1 and grade 2, braille, and phonemic braille media (both analytic and synthetic approaches), 39 subjects from six residential schools were evaluated. Special books were embossed in grade 1 and phonemic braille, and phonemic codes were prepared for use with the analytic and synthetic readers. The teachers were given a 3-day workshop preceding the program. They made daily progress reports and their reactions were used in the evaluation of each approach. At the end of the 1-year program the results indicated that phonemic braille could be used with beginning braille readers; the analytic approach appeared to function more effectively for the phonemic materials than the synthetic approach; grade 1 approaches were not adequately measured; and further research is necessary with development of more adequate materials utilized to make generalizations concerning approaches in braille reading. (Author/JM)

ABSTRACT 1873

EC 501 145 ED N.A.
Publ. Date May 70 4p.
Bleiberg, Robyn

Is There a Need for a Specially Designed Reading Series for Begin-

ning Blind Readers?

EDRS not available

New Outlook For The Blind; V64 N5
P135-8 May 1970

Descriptors: exceptional child research; visually handicapped; reading; instructional materials; evaluation; beginning reading; teacher attitudes; blind

In order to examine the need for new material to teach reading to blind children, a questionnaire was sent to 101 teachers of the blind. Results showed that 64.4% of the teachers expressed a need for a new beginning series and 77.4% stated that they would use such a series. Several additional responses such as the rating popularity of presently used series are also reported. Unique problems in learning braille are noted, and recommended characteristics for a new series are provided. (RD)

ABSTRACT 2161

EC 501 193 ED N.A.
Publ. Date May 70 5p.

Harley, Randall K.; Rawls, Rachel
Comparison of Several Approaches for Teaching Braille Reading to Blind Children.

EDRS not available

Education Of The Visually Handicapped; V2 N2 P47-51 May 1970

Descriptors: exceptional child research; visually handicapped; reading instruction; braille; teaching methods; phonemics; instructional materials

To determine the best approach to the teaching of beginning braille reading, the study used grade 1, grade 2, and phonemic braille media in both the synthetic and analytical approaches in each for six classes of visually handicapped children (mean IQ 82, median age 7.7 years). The Slosson Oral Reading Test and the Gilmore Oral Reading Test were administered at the end of 1 year of training with the following results: synthetic-grade 2 approaches appeared to be superior to the synthetic-phonemic; the analytic approach appeared to function more effectively for the phonemic materials; the effectiveness of grade 1 approaches was not adequately measured; and a longer study with more subjects is necessary to determine more accurately the best approach to braille reading. (Author/JM)

ABSTRACT 2303

EC 005 718 ED N.A.
Publ. Date May 70 7p.

Brugler, J. S.; Young, W. T.

Reading Aid for the Blind.

Stanford University, California, Department Of Electrical Engineering

EDRS not available

Rehabilitation Teacher; V2 N5 P21-7 May 1970

Descriptors: visually handicapped; machine translation; reading; tactual perception

A system that provides the blind with direct access to printed materials for the sighted is discussed. The development of reading machines for the blind is consi-

dered, however, the focus is on a direct-translation machine with tactile output. The way in which the machine operates is described. (RJ)

ABSTRACT 3242

EC 001 959 ED 010 981
Publ. Date Oct 65 7p.

Rosen, Carl L.

Visual Deficiencies and Reading Disability.

EDRS mf,hc

This Article Appeared In The Journal Of Reading, Vol. 9, Oct., 1965.

Descriptors: exceptional child education; reading; visually handicapped; reading difficulty; reading research; vision; vision tests; school responsibility; research reviews (publications); visual perception; reading instruction; reading diagnosis; ametropia; aniseikonia; heterophoria; sensory deprivation

The role of visual sensory deficiencies in the causation of reading disability is discussed. Previous and current research studies dealing with specific visual problems which have been found to be negatively related to successful reading achievement are listed for farsightedness, astigmatism, binocular incoordination, and fusional difficulties. The four primary responsibilities of the school concerning visual problems as applicable to the classroom teacher which are described are the detection of visual problems, the referral of the child to those professionally qualified, the adjustments of instructional technique, methods, and expectations based upon the nature and severity of the visual problem, and leadership and participation in research. (MC)

ABSTRACT 3339

EC 001 603 ED 010 274
Publ. Date 66 166p.

Birch, Jack W. And Others

School Achievement and Effect of Type Size on Reading in Visually Handicapped Children.

Office Of Education (DHEW), Washington, D. C.

EDRS mf,hc

OEC-4-10-028 CRP-1766

Descriptors: exceptional child research; visually handicapped; partially sighted; large type materials; reading materials; reading skills; elementary school students; demography; visual acuity; academic achievement

To study school achievement to establish criteria for type size to be used, data was collected on an original sample of 1,084 partially sighted children in grades 5 and 6, and five equivalent forms of a standardized test containing school-like reading tasks, each form in a different type size, were administered. A best size type for each child was determined. A standardized achievement test in appropriate type sizes was then administered, additional data collected, and a statistical analysis performed. Results and conclusions relative to demographic data, intelligence, visual acuity, reading speed and comprehension, school achieve-

ment, reading distance, type size, and relationships of certain disabilities and selected educational variables are presented. Stated are implications for special education practices, vocational rehabilitation, teacher education, and research. A separate summary of the project accompanies the text. (KW)

ABSTRACT 925

EC 03 0925 ED N.A.
Publ. Date Dec 70 8p.

Kirk, Edith C.

The Future of Reading for Partially Seeing Children.

EDRS not available

Reading Teacher; V24 N3 P195-202 Dec 1970

Descriptors: exceptional child education; visually handicapped; partially sighted; reading; prediction; teaching methods; reading materials

The article considers the future reading of partially seeing children in the light of new developments in improving vision and improving reading instruction through advances in technology, reading research, parent education, and knowledge of child growth. Discussed are the definition of the partially seeing child, the necessity for early identification, the role of parents during the preschool years, and optimum physical conditions for reading in school. The future of beginning reading instruction is envisioned in terms of attention to vision, assessment of reading readiness, methods, and materials. The picture of reading at later levels considers the older child, mechanical aids, class organization, comprehension, study skills, and materials. (KW)

ABSTRACT 1020

EC 03 1020 ED N.A.
Publ. Date Dec 70 3p.

Foulke, Emerson

Non-Visual Communication: IX. Reading by Touch (continued).

EDRS not available

Education Of The Visually Handicapped; V2 N4 P122-4 Dec 1970

Descriptors: visually handicapped; reading speed; visual perception; tactual perception; braille; reading; research projects

One of a series of articles on non-visual communication, the article reviews some experimental results that suggest perceptual factors which must be taken into account in explaining the performance (reading rate) of Braille readers. Experiments cited concern the comparison of visual reading and touch reading, how quickly one can perceive individual letters or groups of letters, and the differences in reading speed when the reader can perceive only one letter at a time (by sight or touch) and when he can experience whole words. Results suggest that when visual readers can obtain information about written language only in the same amounts as Braille readers (i.e., one letter at a time), the performance of the visual and Braille readers are comparable. (KW)

ABSTRACT 1058

EC 03 1058 ED N.A.
 Publ. Date Aug 70 28p.
 Kuck, John H.
How to Build a Closed-Circuit Television Reading Aid.
 EDRS not available
 Research Bulletin; N21 P49-76 Aug 1970

Descriptors: visually handicapped; partially sighted; reading materials; equipment; technology; equipment utilization; television

Designed to aid visually handicapped persons, a detailed description of a closed-circuit television reading aid is given. The article discusses selection of television equipment and describes in detail the writer's design for a camera stand. Dimensional drawings are included and ideas for possible improvements in television reading aids are discussed. (CD)

ABSTRACT 1950

EC 03 1950 ED N.A.
 Publ. Date Mar 71 7p.
 Rex, Evelyn J.
A Study of Basal Readers and Experimental Supplementary Instructional Materials for Teaching Primary Reading in Braille. Part II: Instructional Materials for Teaching Reading in Braille.
 EDRS not available
 Education of the Visually Handicapped; V3 N1 P1-7 Mar 1971

Descriptors: exceptional child education; visually handicapped; instructional materials; basic reading; braille; reading materials; basal readers

The article presents part II of a two part series on basal readers and instructional materials for teaching primary reading in braille. Part I discussed the findings of an analysis of braille features in basal readers. The second part is concerned with the application of the results of the analysis. The development of experimental materials with the thought that they could become the basis of a more extensive set of materials intended for blind children is described, and a pilot study of the materials to test their effectiveness is reported. Suggestions are made for further use of the results of the analysis such as in early reading instruction, remedial instructional materials, transition from print to braille, word recognition, phonic instruction, and basal readers as instructional material. (CD)

ABSTRACT 1955

EC 03 1955 ED N.A.
 Publ. Date Mar 71 4p.
 Foulke, Emerson
Non-Visual Communications. X: Reading by Touch (continued).
 EDRS not available
 Education of the Visually Handicapped; V3 N1 P25-8 Mar 1971

Descriptors: exceptional child education; visually handicapped; reading speed; braille

The article is the tenth in a series dealing

with reading by touch. The problem of the slow rate at which braille is read by most readers, and measures which might be taken to alleviate the situation are considered. Research in the field is cited for possible solutions to the problem. One hypothesis suggested is that of having a continuous line of moving braille characters passing beneath the fingertips; another proposes reorganization of the braille characters on the page in order to increase the number that can be read at any one time. Future articles in the series will feature other suggestions to deal with the problem. (CD)

ABSTRACT 2316

EC 03 2316 ED N.A.
 Publ. Date May 71 4p.
 Foulke, Emerson
Non-Visual Communication. XI. Reading by Touch (continued).
 EDRS not available
 Education of the Visually Handicapped; V3 N2 P55-8 May 1971

Descriptors: exceptional child research; visually handicapped; braille; tactile adaptation; blind; reading speed

The article is the last of 11 installments (Reading by Touch) in a series on nonvisual communication. Reference is made to the previous installment in the series which considered measures to improve the reading rate when using the braille code. The final article considers the possibility of recoding the language so that more meaning than is represented by a single letter can be specified with each code character. The author asserts that there must be an increased supply of dot patterns to which meanings can be assigned if the number of contractions in the braille code is to be greatly increased. The possibility that the supply of dot patterns could be increased by adding locations to the cell in which braille characters are formed or by adding columns to the cell in which characters are formed is explored. A short summation of the series concludes the article. (CD)

ABSTRACT 3170

EC 03 3170 ED N.A.
 Publ. Date 71 7p.
 Knight, John J.
Teacher Produced Slides Aid Reading for Low Vision Children.
 EDRS not available
 Teaching Exceptional Children; V3 N4 P202-8 Sum 1971

Descriptors: exceptional child education; partially sighted; audiovisual aids; slides; reading; visually handicapped; teacher developed materials

Suggested is the use of a 35mm slide projector and teacher produced 35mm slides to meet the specific needs of low vision children in a standard reading program. The slide technique is recommended because it can present words in almost any size needed and because it minimizes laborious and time consuming linear scanning movements by the student. A reflection box teamed with an automatic slide projector can become an automatic programed teaching machine.

Coordination with a tape recorder is also suggested. Illustrated instructions for slide preparation by the teacher are given. (KW)

ABSTRACT 427

EC 04 0427 ED N.A.
 Publ. Date 71 13p.
 Freiburger, Howard
Deployment of Reading Machines for the Blind.
 EDRS not available
 Bulletin of Prosthetics Research; P144-56 Spr 1971

Descriptors: exceptional child education; visually handicapped; partially sighted; program development; reading; equipment; equipment utilization; history

History of reading machine developments for the 20th century is sketched with emphasis first, on changing attitudes toward blindness and the blind and second, on educational and vocational advances demonstrated by the blind. The need for some partially sighted persons to independently read limited amounts of inkprint is noted. Existing devices in 1971 with either audible or tactile outputs permitting partially sighted persons to read are mentioned. A program is then outlined to describe the means of deploying a portable reading machine, now available, to a population of at least 500 blind persons thought to be capable of using the machine. The machine is said to be useful to partially sighted persons working with computers using the binary system, and to other partially sighted persons. (CB)

ABSTRACT 815

EC 04 0815 ED N.A.
 Publ. Date 72 2p.
Reading With Your Ears.
 EDRS not available
 Exceptional Parent; V1 N4 P28-9 Dec/Jan 1972

Descriptors: exceptional child services; visually handicapped; physically handicapped; reading materials; talking books; national programs; tape recordings; phonograph records

Described are the programs of the National Braille Press and the Library of Congress for providing records, tapes, or cassettes of books to persons unable to use standard printed material. Explained are how to request a tape recording of any book from the National Braille Press, who may request tapes, how long it takes, and the minimal costs involved. The description of the offerings of the Library of Congress focuses upon the Talking Book program. Machines needed to play the Talking Book materials, how repairs on the machines can be arranged at no cost, how to register a child for the Talking Book program, and how to order Talking Books are indicated. (KW)

ABSTRACT 1831

EC 04 1831 ED N.A.
 Publ. Date May 72 5p.
 Tuttle, Dean W.

A Comparison of Three Reading Media for the Blind: Braille, Normal Recording, and Compressed Speech.

EDRS not available
Education of the Visually Handicapped;
V4 N2 P40-4 May 1972

Descriptors: exceptional child research;
visually handicapped; reading compre-
hension; reading speed; speech compres-
sion; reading materials; braille

Reading comprehension and speed were
studied in 104 visually handicapped stu-
dents, who were given a reading test in
braille, by listening to normal recording,
and by listening to compressed speech.
Results indicated that there was no dif-
ference in comprehension among the
three reading materials. It was also
found that reading by braille took ap-
proximately twice as long as reading by
listening to normal recording and approx-
imately three times as long as listening to
compressed speech. (CB)

ABSTRACT 1999

EC 04 1999 ED N.A.
Publ. Date 72 10p.

Schale, Florence C.

Exploring the Potential of the Monocu- larly Blind for Faster Reading.

EDRS not available
Academic Therapy; V7 N4 P401-10 Sum
1972

Descriptors: exceptional child research;
partially sighted; gifted; speed reading;
reading speed; visually handicapped;
adolescents

The study investigated the page-at-a-
glance reading phenomenon in two gifted
adolescent readers who used only mono-
cular vision (although they had sight in
both eyes). The study also explored im-
plications for teaching the monocularly
blind to read faster. It was assumed that
if the subjects could maintain phenome-
nal reading rates with one eye masked
and still comprehend over 70% of materi-
al read, similarly gifted monocularly
blind students might do likewise. A pho-
toelectric nystagmographic(PENG)instru-
ment recorded duration of fixations made
during reading. Using only the right eye,
the two subjects were able to scan non-
fictional articles of general interest at
rates of less than 1 second per page with
excellent comprehension. Suggested con-
tributing factors were the conditioning
process of a reinforced reading program,
above average reading ability before the
program, highly developed eidetic image-
ry, and strong dominance personality
traits. (KW)

ABSTRACT 2076

EC 04 2076 ED N.A.
Publ. Date Jun 72 9p.

Umsted, Richard G.

Improving Braille Reading.

EDRS not available
New Outlook for the Blind; V66 N6
P169-77 Jun 1972

Descriptors: exceptional child research;
visually handicapped; secondary school
students; braille; reading skills; reading
speed; reading comprehension; reading
tests

Seventy-two high school students from
three state residential schools for the
blind in the midwest participated in an

experiment to determine the effect of
instruction for increasing speed and ac-
curacy of recognition of the one-cell
whole word and part-word signs, the
two-cell contractions, and short-form
words in English Braille on braille read-
ing skills. Two forms of the Oral Read-
ing Test developed by the investigator,
averaging 705 words in length, were
used. Six criterion measures were estab-
lished to evaluate the effect of a 15-day
training program. Criteria were gain in
silent reading speed on silent reading
test, gain in accuracy on comprehension
test of silent reading test, gain in oral
reading speed on both an individually
administered oral reading test and on the
braille code recognition test, and gain in
accuracy on braille code recognition test.
Pretest and posttest results indicated that
the experimental group increased its si-
lent reading speed by 30% or 29 words
per minute with only a minimal loss in
comprehension scores, which was
thought to be the most significant finding
of the study. Statistically significant dif-
ferences were also found on posttests in
favor of the experimental group over the
control group in increased accuracy and
speed on the braille code recognition
test. Concluding comments focused on
the potential improvement in reading
skills of high school braille readers by
participation in a short course on braille
code recognition. (CB)

ABSTRACT 2991

EC 04 2991 ED N.A.
Publ. Date Oct 72 5p.

Sykes, K. C.

Print Reading for Visually Handi- capped Children.

EDRS not available
Education of the Visually Handicapped;
V4 N3 P71-5 Oct 1972

Descriptors: exceptional child education;
visually handicapped; reading; reading
ability; reading readiness; educational
methods

Print reading for visually handicapped
children is discussed from the viewpoint
that teaching approaches encouraging
print reading are essential because of
both increased reading demands placed
on the grade school child and accelerated
trend toward integration of visually
handicapped child with sighted peers in
regular schools. Sight utilization is said
to be a concern with functional use of
vision. Provision of optimum reading
conditions and corrective lenses for near
vision are reported to enable the handi-
capped child to read standard print.
Elaborated on are different factors of
reading conditions such as illumination,
quality of print, reading posture, flexible
reading distance, and optical aids.
Reading readiness of the child, with
emphasis on visual discrimination, and a
language-experience approach to reading
instruction that is child-centered are re-
viewed, as well as relevant reading ma-
terials for different ages. (CB)

ABSTRACT 137

EC 05 0137 ED 069 062
Publ. Date 72 34p.

Communication and Computation

Skills for Blind Students Attending Public Schools.

Suffolk County Board of Cooperative
Educational Services, Dix Hills, N. Y.
EDRS mf, hc

Descriptors: exceptional child education;
visually handicapped; teaching methods;
braille; communication skills; reading;
reading readiness; writing skills; mathe-
matics; itinerant teachers; public schools;
Nemeth Code

Outlined are evaluative and instructional
procedures used by itinerant teachers of
blind children in public schools to teach
readiness for braille reading and writing,
as well as braille reading and writing,
signature writing, and the Nemeth Code
of braille mathematics and scientific no-
tation. Readiness for braille reading and
writing is considered in terms of attitudi-
nal readiness, physical evaluation, social
and emotional readiness, and the devel-
opment of tactile discrimination and
prewriting skills. Noted are aims and
techniques of teaching braille, mechanics
of reading braille for different age groups
from kindergarten through senior high
school, and problems inherent in the use
of braille such as difficulties with unwiel-
dly or hard to obtain volumes and confu-
sion due to the multiple uses of braille
symbols. Examined are techniques for
teaching braille writing, the use of the
slate and stylus for braille writing, and
the mechanics of signature writing.
Listed are supplementary aids for teach-
ing the Nemeth Code to kindergartners
through senior high school students as
well as aids and devices for supplemen-
tary mathematics and science. (GW)

ABSTRACT 1356

EC 05 1356 ED N.A.
Publ. Date Mar 73 8p.

Miller, William H.; Porter, Jeffrey E.

"Read It. Say It Fast." The Use of Distar Instructional Systems with Visually Impaired Children.

EDRS not available
Education of the Visually Handicapped;
V5 N1 P1-8 Mar 1973

Descriptors: exceptional child education;
visually handicapped; early childhood;
language instruction; reading; program
descriptions; educational programs; ma-
terial development; Distar Instructional
System

Described is an adaptation of the Distar
Instructional System, a program based
on instruction in precise behavioral
objectives, to teach language and reading
skills to both partially sighted and totally
blind children. Teacher orientation to the
program is reported to have consisted of
a 6-month period of lectures, consulta-
tion, and a workshop. Adaptations for
partially sighted beginning readers are
said to have involved enlargement of
print, exclusion of visual embellish-
ments, and the exaggeration of hand sig-
nals used in the management of student
responses. Alterations necessary to use
the program with totally blind beginning
readers are given to be a change in lay-
out to accommodate the sequential na-
ture of Braille, the simplification of spell-

ing, and the replacement of hand signals with audible signals. Instructional benefits of the program are seen to include transfer of training to other areas such as group science instruction as well as gains in reading skills. (DB)

ABSTRACT 285

EC 06 0285 ED N.A.
Publ. Date Oct 73 4p.
Bassler, Harry
The Optacon: A Personal Report.
EDRS not available
Rehabilitation Teacher; V5 N10 P13-6
Oct 1973

Descriptors: exceptional child education; visually handicapped; blind; sensory aids; equipment evaluation; reading; Optacon

Described by a blind user is the Optacon, an electronic device to enable the blind to read inkprint materials. The Optacon is explained to convert printed symbols into enlarged tactile forms and to have been used by the author for such diverse reading as personal mail, labels, recipe books, telephone directories, and computer printouts. It is stressed that using the Optacon requires a difficult training period. The address from which the Optacon can be purchased is provided as is the price. Suggestions are given for funding sources such as state rehabilitation offices or corporations. (DB)

ABSTRACT 323

EC 06 0323 ED N.A.
Publ. Date 73 70p.
Moore, Mary W. and Others
Professional Preparation of Teachers of Reading with the Optacon.
Pittsburgh Univ., Pa. Department of Special Education and Rehabilitation.
Richard King Mellon Foundation, Pittsburgh, Pa.
EDRS not available
Department of Special Education and Rehabilitation, School of Education, University of Pittsburgh, Pittsburgh, Pennsylvania
Special Study Institutes (Summer, 1973)

Descriptors: exceptional child education; visually handicapped; inservice teacher education; reading; summer programs; institutes (training programs); sensory aids; teaching guides; teaching methods; tactual perception; Optacon

Presented is a guide used by inservice teachers and agency caseworkers in three 2-week summer institutions (1973) for teaching visually handicapped children and adults how to read with the Optacon, a portable optical-to-tactile-converter. The institutes are said to have been part of a two-year special education pilot project to demonstrate usefulness of the Optacon. Institute personnel and participants are listed. The Optacon is described in terms of development through a government/university/industry program, unaided reader use with any type between six and 20 points, and portability (4 pounds). Operation is discussed whereby a reader tracks regular print with a camera and reads on a tactile array which contains

vibrating pins. Listed in the course outline for teaching reading with the Optacon are components such as instructional materials, strategies, and psychological factors. Specified for teachers are competencies for teaching integration of motor, perceptual, and cognitive skills; and suggested are such techniques as remembering a serial sequence of letters to recognize a word. Appendixes comprise more than half the document and contain the following components: instructions for presenting letters to Optacon readers such as describing lower case 'h' with 'left ascender is attached to one hump'; tapes listed by type font and record speed in areas such as word recognition, building, and speed skills; sample training logs including information given by tracking aid used, control settings, camera materials, and comments/difficulties; and lists of books, publishers, training materials, and tests to evaluate student potential for learning to read with the Optacon. (MC)

ABSTRACT 977

EC 06 0977 ED N.A.
Publ. Date Jan 74 7p.
Crandell, John M.; Wallace, David H.
Speed Reading in Braille: An Empirical Study.
New Outlook for the Blind; V68 N1
P13-9 Jan 1974

Descriptors: exceptional child research; blind; braille; reading speed; teaching methods; visually handicapped; young adults; adults

Reported is a study on the effects of 6 days of rapid reading training and rapid reading plus recognition training on the reading rates and comprehension of 22 blind braille-reading adults (ages 16 to 50 years). Speeds of up to 225 words per minute are said to be feasible without a significant loss of comprehension. A review of the literature, a description of the experimental procedures and instructions, and an analysis of pretest and post-test results are included. (Author)

ABSTRACT 1066

EC 06 1066 ED N.A.
Publ. Date Feb 74 8p.
Goldish, Louis H.; Taylor, Harry E.
The Optacon: A Valuable Device for Blind Persons.
New Outlook for the Blind; V68 N2
P49-56 Feb 1974

Descriptors: exceptional child education; blind; reading; electromechanical aids; visually handicapped; adults; surveys; sensory aids; Optacon

Described are results of an independent survey of more than 100 blind mostly adult users of the Telesensory Systems' Optacon (a reading device utilizing print-to-tactile-image conversion) about user characteristics, the uses to which the device is put, advantages and disadvantages, reliability, training, the manufacturer, and costs. The Sensory Aids Development Program of the American Foundation for the Blind concludes that the Optacon is a useful device and a sound investment for many types of uses

by many different kinds of blind persons. (Author/MC)

ABSTRACT 1094

EC 06 1094 ED N.A.
Publ. Date Jan 74 5p.
Fisher, Harvey
Braille Rapid Reading Workshop.
EDRS not available
Rehabilitation Teacher; V6 N1 P31-5 Jan 1974

Descriptors: exceptional child education; visually handicapped; blind; adults; reading speed; braille; teaching methods; workshops

Thirteen braille instructors participated in a workshop 3 hours per day for 10 days to learn braille rapid reading. The students were first encouraged to perform 'unreading' by moving hands rapidly over braille material, then to comprehend bits and pieces of sentences when moving hands rapidly, next to recognize whole words and short phrases, and finally to select the reading style that had worked best during experimentation. Initial reading rates ranged from 15 to 200 words per minute, (WPM) and final rates reached high levels of 500 WPM (one student achieved 1000 WPM. The workshop experience had implications for teaching braille. (MC)

ABSTRACT 1202

EC 06 1202 ED N.A.
Publ. Date Sep 73 137p.
Bliss, James C., Ed.
Optacon Training - Teaching Guidelines.
EDRS not available
Telesensory Systems, Inc., 2626 Hano-ver Street, Palo Alto, California 94304

Descriptors: exceptional child education; visually handicapped; blind; teaching guides; sensory aids; tactile perception; reading skills; Optacon

The teaching manual is intended to aid the training of blind persons in the use of the Optacon, a device which converts normal print into tactile form. The loose-leaf format is seen to allow for convenient updating and additions. The introductory section describes the Optacon concept and summarizes the learning process and a sample 9-day teacher training program. Considered in the section on student factors are capabilities important in Optacon reading and means of evaluating Optacon performance. The section on equipment factors examines the following areas: principles of operation of major Optacon subsystems, modes of Optacon operation, supplementary teaching aids (such as a master/slave cable allowing several Optacons to be attached to one camera), the controls, a method for checking equipment functioning, equipment arrangement, introduction of the equipment to the student, and special Optacons (such as a left-handed Optacon and training devices. Detailed in the section on teaching techniques and materials are approaches to teaching manual skills, tracking ability, grapheme recognition, word recognition, and initial text reading. Class organization and ad-

ministration are focused on in another section which offers suggestions for preliminary organization of the class, teacher/student scheduling, class supervision, and forms used in training. The final section notes general considerations in followup training and provides a bibliography of 26 books appropriate for Optacon reading at various ability and interest levels. (DB)

ABSTRACT 1789

EC 06 1789 ED N.A.
Publ. Date Mar 74 8p.
Brothers, Roy J.

Classroom Use of the Braille Code Recognition Materials.

Education of the Visually Handicapped;
V6 N1 P6-13 Mar 1974

Descriptors: exceptional child research; visually handicapped; instructional materials; braille; reading skills; elementary school students; secondary school students; effective teaching; reading speed

Seventeen special teachers who were trained in a workshop used the Braille Code Recognition (BCR) materials with 24 visually handicapped students in grades 4 through 12 for 13 days to determine effectiveness of the teachers' instructions and effectiveness of the materials on braille reading skills of students. The materials consisted of 20 BCR lists in print and braille forms involving 176 randomly assigned contractions and short-form words in English Braille, and 12 braille code exercises. Some of the results indicated that the mean number of recognition errors decreased by approximately 82% during the trial period, that the mean recognition time for reading BCR lists decreased by 47%, and that for 20 students there was a significant mean increase in braille reading speed and a significant gain in comprehension.

The materials appeared to be effective with beginning as well as experienced braille readers. (Noted is current production of the materials at the American Printing House for the Blind). (MC)

ABSTRACT 2145

EC 06 2145 ED N.A.
Publ. Date 74 60p.
Kusajima, T.

Visual Reading and Braille Reading: An Experimental Investigation of the Physiology and Psychology of Visual and Tactual Reading.

American Foundation for the Blind, Inc.,
15 West 16th Street, New York, New York 10011 (\$3.50).

Descriptors: exceptional child research; visually handicapped; blind; reading braille; reading skills; tactual perception; visual perception; physiology; psychology

Comparative tests were conducted to discover psychological and physiological similarities and differences between visual and tactual (braille) reading. Experiments in the psychology of braille reading examined functional differentiation of the fingers, finger function in bimanual reading, characteristics of bimanual braille reading, return movements between braille lines, dominant and subordinate letters, and finger pressure during braille reading. Reviewed was prior experimental research on eye movements during reading, and on individual differences related to such reading conditions as proofreading, test taking, reading of numbers, and regressive movements. Studies using artificial mobile eyes and contact lenses were reported. Examination of bimanual tactile reading showed that hand movements are uniform in rate and parallel in displacement and that the second reading finger

performs no essential function in the tactile reading process. Visual and tactual reading were found to have a basic similarity of psychological function. Commonalities were found between pauses in eye reading and touching motions in tactile reading. (GW)

ABSTRACT 2236

EC 06 2236 ED N.A.
Publ. Date Apr 74 14p.
Tuttle, Dean W.

A Comparison of Three Reading Media for the Blind: Braille, Normal Recording, and Compressed Speech.

American Foundation for the Blind Research Bulletin; V27 P217-30 Apr 1974

Descriptors: exceptional child research; visually handicapped; blind; adolescents; young adults; reading ability; instructional media; braille; speech compression; talking books; tape recordings

Compared with 104 blind students 14 through 21 years of age were the efficiency of three reading media: braille, listening to a normal recording, and listening to compressed speech. Each S took three equivalent forms of the Reading Versatility Test, Intermediate Level; one in braille, one in normal recording, and a third in compressed speech. An index of learning efficiency (comprehension score per unit of time reading) was computed for each test. Results indicated that for the total sample, there was no difference in comprehension among the three media, that braille took almost twice as long as reading by listening to normal recording and almost three times as long as reading by listening to compressed speech, and that compressed speech was the most efficient media for all Ss, whether high or low in braille or listening skills. (DB)

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